

CLAIMS

What is claimed is:

1. A method for handoff of a wireless terminal between first and second stations in one of a wireless local area network (WLAN) and a wireless wide area network (WWAN), wherein the stations may both be part of a WLAN or a WWAN or one station is part of one of a WLAN or a WWAN and the other station is part of a remaining one of the WLAN and WWAN comprising:

said terminal:

responsive to loss of a connection with said first station, scanning for said second station;

retrieving information from said second station;

determining that the second station is different from said first station;

transmitting an association message to said second station, and, upon receipt of an association success message from said second station, initiates a handoff, providing to said second station information regarding said first station;

said second station contacting said first station responsive to the information received from said terminal;

said first station rerouting traffic to said second station and releasing said first station; and

said second station responsive to the handoff procedure initiated by said first station reestablishing the session between said terminal and said second station.

2. A method for handoff of a wireless terminal between first and second stations in one of a wireless local area network (WLAN) and a wireless wide area network (WWAN), wherein the stations may both be part of a WLAN or a WWAN or one station is part of one of a WLAN or a WWAN and the other station is part of a remaining one of the WLAN and WWAN, comprising:

said terminal:

responsive to loss of a connection with said first station, scanning for said second station;

retrieving information regarding said second station;

determining that the second station is different from said first station;

transmitting an association message to said second station including information about the first station;

said second station contacting said first station responsive to the information received from said terminal to obtain an IP address of said lost connection;

said terminal providing the IP address of said lost connection responsive to the request therefor;

said second station contacting said first station to initiate a handoff from the first station to the second station;

said first station rerouting traffic to said second station and releasing said first station; and

said second station, responsive to the handoff procedure initiated by said first station reestablishing the session between said terminal and said second station.

3. A method for handoff of a wireless terminal between first and second stations in one of a wireless local area network (WLAN) and a wireless wide area network (WWAN), wherein the stations may both be part of a WLAN or a WWAN or one station is part of one of a WLAN or a WWAN and the other station is part of a remaining one of the WLAN and WWAN, comprising:

said terminal:

responsive to loss of a connection with said first station, scanning for said second station;

retrieving information regarding said second station;

determining that the second station is different from said first station;

transmitting an association message to said second station, including information about the second station;

said second station contacting said terminal responsive to the information received from said first station to obtain an IP address of the lost connection;

said second station contacting the first station to initiate the handoff;

said first station rerouting traffic to said second station and releasing said first station; and

said second station, responsive to the handoff procedure initiated by said first station reestablishing the session between said terminal and said second station.

4. A method for handoff of a wireless terminal between first and second stations in one of a wireless local area network (WLAN) and a wireless wide area network (WWAN), wherein the stations may both be part of a WLAN or a WWAN or one station is part of one of a WLAN or a WWAN and the other station is part of a remaining one of the WLAN and WWAN, comprising:

said terminal:

while connected to said first station, scanning for a second station;

retrieving information from said second station;

determining that the second station is different from said first station;

transmitting an association message to said second station, and, upon receipt of an association success message from said second station, initiates handoff, providing to said first station information regarding said second station;

said first station contacting said second station responsive to the information received from said terminal;

said first station rerouting traffic to said second station and releasing said first station; and

said second station responsive to the handoff procedure initiated by said first station reestablishing the session between said terminal and said second station.

5. A method for handoff of a wireless terminal between first and second stations in one of a wireless local area network (WLAN) and a wireless wide area

network (WWAN), wherein the stations may both be part of a WLAN or a WWAN or one station is part of one of a WLAN or a WWAN and the other station is part of a remaining one of the WLAN and WWAN, comprising:

said terminal:

while connected to said first station scanning for said second station;

retrieving information from said second station;

determining that the second station is different from said first station;

transmitting an association message to said second station including information about the first station;

said second station contacting said terminal to obtain an IP address of said connection;

said terminal providing the second station with IP address of said connection responsive to the request therefor;

said second station contacting said first station to initiate a handoff from the first station to the second station;

said first station rerouting traffic to said second station and releasing said first station; and

said second station responsive to the handoff procedure initiated by said first station reestablishing the session between said terminal and said second station.

6. A method for handoff of a wireless terminal between first and second stations in one of a wireless local area network (WLAN) and a wireless wide area network (WWAN), wherein the stations may both be part of a WLAN or a WWAN or one station is part of one of a WLAN or a WWAN and the other station is part of a remaining one of the WLAN and WWAN, comprising:

said terminal:

while connected to said first station, scanning for said second station;

retrieving information from said second station;

determining that the second station is different from said first station;

transmitting an association message to said second station, including information about the first station;

said second station contacting said terminal to obtain an IP address of said connection;

said second station contacting the first station to initiate the handoff;

said first station rerouting traffic to said second station and releasing said first station; and

said second station having means responsive to the handoff procedure initiated by said first station for reestablishing the session between said terminal and said second station.

7. Apparatus for handoff of a wireless terminal between first and second stations in one of a wireless local area network (WLAN) and a wireless wide area network (WWAN), wherein the stations may both be part of a WLAN or a WWAN or one station is part of one of a WLAN or a WWAN and the other station is part of a remaining one of two WLAN and WWAN, comprising:

said terminal comprising:

means responsive to loss of a connection with a first one of said stations, scanning for said second station;

means for retrieving information from said second station;

means for determining that the second station is different from said first station;

means for transmitting an association message to said second station, and, upon receipt of an association success message from said second station, initiating a handoff and providing to said second station information regarding said first station;

said second station comprising:

means for requesting said first station to initiate a handoff responsive to the information received from said terminal;

said first station comprising:

means for rerouting traffic to said second station and releasing said first station; and

said second station having means responsive to the handoff procedure initiated by said first station for reestablishing the session between said terminal and said second station.

8. The apparatus of claim 7 wherein said first and second stations are each comprised of an extended service set (ESS) having an access point and an access router.

9. The apparatus of claim 8 wherein the ESS of said first station includes means for providing said terminal with an ESS identification (ESS ID) and a basic service set identifier (BSS ID).

10. The apparatus of claim 9 wherein the means for retrieving information from said second station retrieves an ESS ID and BSS ID of said second station for use by said means for determining.

11. The apparatus of claim 9 wherein said terminal further comprises means for connecting to an internet protocol (IP) network wherein said terminal is assigned an IP address.

12. The apparatus of claim 9 wherein said terminal further comprises means for connecting to an internet protocol (IP) network wherein said terminal is connected through an IP address of said terminal.

13. The apparatus of claim 7 wherein said scanning means includes means to lock on to a beacon from said second station.

14. Apparatus for handoff of a wireless terminal between first and second stations in one of a wireless local area network (WLAN) and a wireless wide area network (WWAN), wherein the stations may both be part of a WLAN or a WWAN or one station is part of one of a WLAN or a WWAN and the other station is part of a remaining one of the WLAN and WWAN, comprising:

said terminal comprising:

means responsive to loss of a session obtained by connection with said first station, to scan for said second station;

means for retrieving information from said second station;

means for determining that the second station is different from said first station;

means for sending an association message to said second station including information about the first station;

said second station comprising:

means for contacting said first station responsive to the information received from said terminal to obtain an IP address of said lost connection;

said terminal having means for providing the IP address of said lost connection responsive to the request therefor;

said second station having means for requesting said first station to initiate a handoff from the first station to the second station;

said first station having means for rerouting traffic to said second station and releasing said first station; and

said second station having means responsive to the handoff procedure initiated by said first station for reestablishing the session between said terminal and said second station.

15. Apparatus for handoff of a wireless terminal between first and second stations in one of a wireless local area network (WLAN) and a wireless wide area network (WWAN), wherein the stations may both be part of a WLAN or a WWAN

or one station is part of one of a WLAN or a WWAN and the other station is part of a remaining one of the WLAN and WWAN, comprising:

said terminal comprising:

means responsive to loss of a connection with a first one of said stations, to scan for a second station;

means for retrieving information regarding said second station;

means for determining that the second station is different from said first station;

means for sending an association message to said second station, including information about the second station;

said second station having:

means for contacting said terminal responsive to the information received from said first station to obtain an IP address of the lost connection; and

means for requesting the first station to initiate the handoff;

said first station having means for rerouting traffic to said second station and releasing said first station; and

said second station having means responsive to the handoff procedure initiated by said first station for reestablishing the session between said terminal and said second station.